



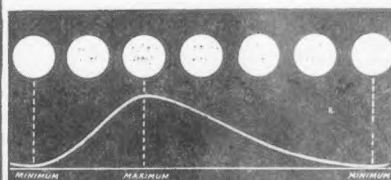
# THE AMERICAN WEEKLY

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## A Race of Supermen Who Perished 20,000 Years Ago?

Evidence Which Suggests There Was a Powerful and Highly Civilized People Who Understood Secrets of Nature Which Were Only Recently Rediscovered by Modern Man—Where They Lived—What Destroyed Them



Until Recently Nobody Suspected That There Was Any Relation Between the Varying Solar Activity Revealed by Sun Spots and the Politics of Civilized Countries. A Recent Study, However, Presented in the Academy of Sciences at Paris, Showed a Connection Between Solar Activity and the Changes in English Politics.

Interstellar Space Is Traversed by Radiations and Electro-Magnetic Waves, Which Are Still Imperfectly Known, But Which Reveal Themselves Through Certain Phenomena, Such, for Instance, as the Polar Auroras. These Radiations, Some of Which Are of Great Power, Have No Doubt an Active Influence on the Bodies of Living Things.

By Prof. Rene Thewissen,  
The Distinguished French Scientist.  
CHAPTER V.  
(Continued from Last Sunday)

IN the last chapter we asked what the sorcerers of the Middle Ages really were. Today we will answer the question. These queer characters whom our forefathers used to probably burn at the stake are represented today by harmless and ignorant fakirs who read fortunes by cards and tell of the future and the "Professors" at the county fairs who sell a false guarantee to cure anything. In the Middle Ages the sorcerers and seers were jokers and charlatans, too. But besides their bonhomie and shrewdness they also possessed real, scientific knowledge, forbidden by ecclesiastic authority, during the dark ages.

In previous chapters we have seen that what made the dark ages dark, was that the light of knowledge had been almost completely extinguished. This knowledge of the natural sciences was common among the ancient Greeks and Romans, but they did not discover it. As has already been mentioned, they quoted the later Chaldeans and the Egyptians, who in turn reflected the light from all further back until, in our search for its source, we reach the very beginnings of history and find that these original scientists made their great discoveries and perished in prehistoric times.

Science has been called "classified knowledge," but it is really any knowledge that has been verified. Alleged knowledge that cannot be verified but must be taken on faith may be perfectly correct, too, but also it may be perfectly false and therefore such assertions cannot be accepted by scientific minds. The mysterious secrets of the sorcerers belong to the scientific group or the other? We will answer that question also. Sorcery was very widespread in certain provinces of France, principally in Lorraine and the Basque country, because these regions were in contact with two great centers of intellectual activity at this period—Germany on the east and Spain on the south.

The inhabitants of the latter country were in general level in a complete state of ignorance by the fanaticism of the monks and the Inquisition. But among them was a foreign element which at this time represented a degree of scientific civilization much more advanced than that of Europe. This element consisted of the Arabs, who were then at a high level of their power, and their learned men and their great libraries were the remaining depositories of the science of antiquity.

In many of the formulas of sorcery, as well as in trials and documents of various kinds, we often find the name of the City of Toledo. That is because this city was in old times celebrated as the great center of magic, as is proved by the reports of trials, the depositions of investigators, the records of the Inquisitors, etc.

Gilbert, Bishop of Rheims in the Eleventh Century, studied magic with the Spanish Arabs. The value of this instruction had a universal reputation, for certain old authors, like Caesar of Heisterbach, teach us that people came from Saxony and Bavaria to Spain to obtain it. They came, also, from England, which began quite early in the Middle Ages to take the lead in the intel-

lectual movement. Documents prove to us that many sorcerers persecuted by the ecclesiastical and civil tribunals were inspired by the masters of Toledo and retained their initiation there.

The University of Magic, maintained at Toledo, had as professors certain Masters of high culture and many very learned Jews, who were sheltered from persecution because they had necessary work to do in connection with the royal finances of Spain. The Jews, which they gave to their pupils were all surrounded with great mystery.

In accordance with the custom, which we shall find more and more marked as we go back into the past, the revelation of their secrets was only made to the initiated after innumerable formulas and ceremonies. Magic and the occult sciences, which were well adapted to impress the minds of the neophytes and to give them at the same time a great advantage over the common herd, were taught to them together with very advanced scientific instruction. But the latter was condemned by the authorities as much as the first two.

All the sciences of nature are children of the devil, the Inquisition declared. "A woman," it said, "who dares to cure disease with the help of venereal substances is proved by this very fact to be a sorceress and ought to be burned."

This is the pure and simple condemnation of all medicine and all pharmacy. Those who studied the anatomy of the human body were also condemned to the stake. The science of anatomy was studied by the sorcerers and seers, who brought to the schools sabbath bodies stolen from graveyards. But the most absolutely condemned persons were the astronomers, for they had the audacity to pretend that other bodies similar to our globe might exist in the universe, and carried their "abominable" to the point of asserting that perhaps the earth revolved around the sun.

That was the greatest of all crimes of science, the one which was the most severely prosecuted not only when the offenders were obscure witches, but when they were illustrious thinkers who have done honor to humanity. It is sufficient to recall a few celebrated names—Peter of Abano, author of a treatise on astronomy, burned at Bologna, Cero of Acoli, burned at Florence for having asserted the movement of the earth; Giordano Bruno, burned at Rome for the same reason; Cop-

pernicus, who was subjected seven times to torture for the same reason, and saved by death alone from the stake.

The authorities took revenge for not being able to burn the illustrious astronomer, Copernicus, who died before the publication of his great work, "De Revolutionibus," by burning his immortal book, and they dug up the body of the learned physician, Galileo de Padua, to throw it into the flames.

Previously known, that Kepler and Galileo only escaped the flames by exceptional luck, as by complete accident. And considerably later, in the middle of the eighteenth century, at the time the French minister of the king, Calonne, was fulfilling his duty to build roads for his country, his government, his noble friends were good against Copernicus as if Copernicus had been a common criminal.

When we examine the catalog of this absolute hatred, we find the thread which has guided us up to the present, and thanks to which we are going to discover the original sources of nature. The ancient knowledge of the universe was almost completely wiped out by the metaphysics of the Middle Ages, and we have seen, it almost on the point of becoming extinct in the hands of sorcerers, who had learned little except the mysterious practices connected with it.

Another class of strange and usually condemned persons, will now come before us, belonging to even more lowly than the others and revealing the still closer bonds which connect them with the fabulous past. Many of the great astronomers whom we have mentioned were also renowned astrologers. Astrology, like alchemy, was a forbidden science and those who practiced it were considered in the same class as sorcerers.

Up to the beginning of the Twentieth Century, exact sciences almost admitted that medieval authorities to be correct in this matter and declared that these pretended sciences, even if they were not the children of the devil, were at least the children of foolishness and credulity. To assert that the destiny of men, their patience, or character of the stars, or to attempt to prove that lead can be changed into gold, science declared to be in error, which had long served to mislead the ignorant. Reason, at first sight, rises up against these ideas. And if it does not go as far as wishing to burn those who taught them, it regards them with ironical pity.

But now the most recent discoveries of modern science tend to prove that this irony is unjustified, and



Up to the Beginning of the Twentieth Century Educated People Laughed at Astrologers and Alchemists, Considering Them Mere Charlatans. It Is Realized Today That They Understood Secrets Which Modern Science Is Only Just Beginning to Discover.

that the more we go into this question, with the perfected methods of investigation which we now possess, the more we see that the old astrologers and alchemists were very often right.

The most difficult about astrology and the composition of matter explain many phenomena which modern science has not yet explained, and many of the things which modern science has explained only after the most painful and long search.

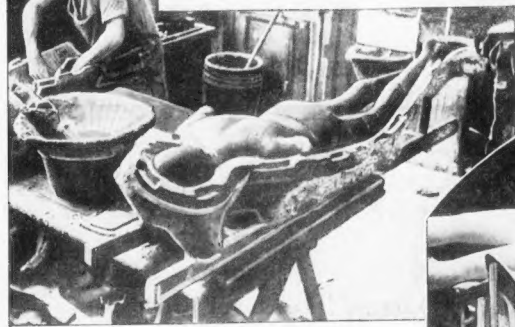
A more direct piece of evidence is the influence of the planets on the earth in space after the fashion of the planets on the earth. The workman himself of the modern world, and even the most advanced of the modern world, is still a slave to the planets. The planets, which are so far away, have a direct influence on the terrestrial world, also has a direct influence on our life. Examples of that are numerous, but we can mention only a few of the most striking.

It is known that several species of animals, and particularly marine worms, perform the periodic acts of their lives at remarkable definite fixed dates which have a relation to the phases of the moon. On the same date the natives look upon the planets which have a veridical as a true calendar. For the natives living in the tropical zone on the first day of the last quarter of the moon in November—that is to say, at the end of the month in the Southern Hemisphere. On this day the natives of the moon is disturbed and there being signs of storm. Two days later the moon is seen and begins to rise in large numbers.

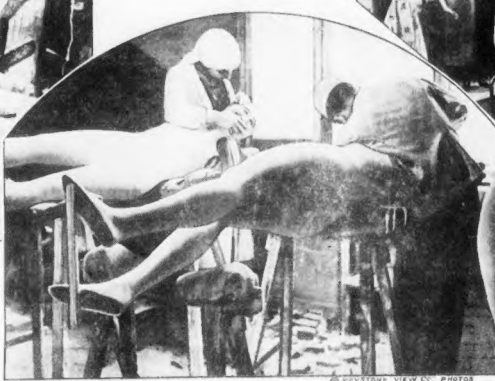
In the Atlantic, another species (Eunice hirsuta), is

(Continued on Page 23)

# Beauty Contests for Plaster Manikins



Winners Putting the Finishing Touches on the Cases Before the Arms Are Attached and the Faces Modeled.



A Group of Completed Manikins Representing All Types of Beauty and in Various Poses That Add to Their Lifelike Appearance.

A Berlin Manikin Factory in Which Plaster Is Poured Into Molds and Fashioned Into the Likenesses of Beautiful Young Models, Whose Forms Are Thus Reproduced.

A WORLD-WIDE demand on the part of store persons for more beautiful and lifelike wax and plaster manikins, on which to display dresses and gowns, has brought about an unusual race between the French and the German makers of these figures. This race has resulted itself into a sort of international beauty contest for dummies, as comely of face and graceful of body as they are inanimate.

These ladies of plaster and wax are modeled on the lines of the famous actresses from the top of the head to the tip of the little toe. They are faithful reproductions of real young women.

At the moment the contest seems to be a tie-up. The manikin turned out in the factories of France are as pleasing to the buyers' eyes as those made in Germany, and the German models are quite as attractive as those pro-

duced in France. Sales seem to be about evenly divided. The French manikin makers recently made a strong bid for supremacy by offering for sale wax and plaster dummies

fashioned in the exact likeness of celebrated beauties of the French stage and screen. Not to be outdone by this smart move, the German manikin makers

gaged the twelve most beautiful artists' models in the studios of Berlin. At least seven of these young women are known by reputation all over Europe and three of them have won important beauty contests. Plaster reproductions of these little and graceful beauties were turned out by the score, and these models were

quickly purchased by buyers, who shipped the pretty puppets to shops in London, Vienna and Budapest, and even to the United States and South America.

The battle of the plaster beauties is still raging, in a quiet, artistic way, of course, and the time to pick the winners has not yet arrived. Owners of shops and stores are maintaining an interested neutrality and buying more and better manikins than they ever hoped to see.

## A Race of Supermen

(Continued from Front Page)

subject to the same laws in the last quarter of the moon in July. In Japan, many similar animals make four regular runs, immediately after the full moon and the new moon in October and November, and once after sunset.

On the other hand, investigations recently made in France along the coast of Brittany, on the marine coast of Plazeneux, Dourville, Laperouse, Glanc, etc., have given rise to curious observations, of which the following table gives an idea. It applies to the Pleiades in Brittany.

The day after the full moon in May, no moon visible. The night of the last quarter, a large number. The day after the new moon, a few only. The night of the first quarter, an innumerable number. The rhythm continues with the same regularity during the whole of Summer—morning during the fall and new moon, millions at the time of the first and last quarter.

A curious fact is that at the same time another species (Terrestrial Culex) appears in a man at the moment of the full moon and disappears at the time of the quarter. This is the opposite of the preceding case, while Leptocercus Glaucus runs only in the last quarter of the moon in May, June and July and not in the first. But in one case or the other, the influence of the moon is evident although the reason for it cannot yet be explained.

Many similar examples could be cited. As we do not wish to dwell too long on these questions, we will merely recall a very curious observation of the action of the sun on the nervous system, and consequently upon social life, an observation which has recently been presented to the Academy of Sciences of Paris by its author, M. Thievery. The scientist has collected a series of interesting facts in which he compares the composition of the English Parliament for 100 years with the stages of varying solar activity. In agreement with this, the Liberal power continues if the solar activity remains great or increases. If the minimum period is prolonged, the Conservative continues to dominate.

From 1830 until the end of the studies of M. Thievery (1927), the Liberals had a majority at the periods of maximum solar activity. On the other hand, during the minimum period, power passed to the Conservatives. In agreement with this, the Liberal power continues if the solar activity remains great or increases. If the minimum period is prolonged, the Conservative continues to dominate.

It is a curious fact in confirmation of this remarkable claim that the sun affects politics that the recent overthrow of the Socialist Government in England and the overwhelming success of the Conservative party came at a period of minimum sunspot activity.

Whether intended to be as simple as M. Thievery's curious observation is pure astrology. It is hard to explain the facts as due to the influence of changes in the solar rays.

especially the ultra-violet ones, on human psychology, the maximum periods corresponding to an increase in the nervous reflexes of the population and the minimum periods to their depression. This is a possible explanation, but whatever it may be, the influence of the sun on man is evident.

It would be strange, indeed, if this influence did not exist. We know today that the earth is literally bombarded with rays of cosmic origin, of a frequency far greater than that of the radium rays, and endowed with a power of penetration so great that some rays can penetrate lead to a thickness of five or six feet.

How could such phenomena, acting upon the bodies and the nervous system of living beings, fail to produce a marked effect? The same may be said about the operations of the old alchemists, who were long considered to be nearly mad men and whose theories seem to us today as astonishing that we cannot determine upon what proofs they based them, for they did not know, it seems, the science that we are just beginning to learn today.

These alchemists, possessing mysterious secrets which they passed jealously, and the formulae of which were only exoteric, in a hermeticism which was now incomprehensible to us, asserted among other things that mercury could be changed into gold. It appears even that certain of them—Nicolas Flamel, for instance—succeeded in doing this. This transformation, which was considered absurd up to the beginning of the present century, is theoretically possible. To prove it we will recall in the first place certain physical laws—it is known that all bodies



Miss Maria Aurora Obregon y Corral, who has been chosen as the most beautiful girl in Mexico. Her selection was made at the annual Black and White Ball at the Mexico City Country Club, where she reigned as Queen of Chaperones. The girl picked to preside over this important and fashionable function must have certain blood, and the honor automatically carries the title of Mexico's most beautiful unmarried woman. Miss Corral is five feet seven inches tall, a brunette, and weighs 116 pounds.

## Who Perished 20,000 Years Ago?

are formed of atoms consisting of a central nucleus, which is a small particle of positive electricity around which the electrons gravitate, like planets around the sun, the electrons being particles of negative electricity. But this central nucleus is formed in part of other and smaller particles, the protons, which are the nuclei of the simplest atom, the atom of hydrogen. And the composition of different bodies varies according to the total electric charge formed by the union of the protons. For instance, the atom of nitrogen has a nucleus whose charge is equal to seven times that of the atom of hydrogen, oxygen has a charge equal to eight times that of the atom of hydrogen, etc.

Except in certain special cases, the structure of the nucleus is very stable. For instance, the nucleus of the atom of aluminum has always eleven unbalanced electric charges, and this remains always constant. But if one or several charges from this nucleus, give us the hidden meaning of the substance. We should obtain a transformation such as the old alchemists and they obtained.

Is this possible? Science and it was not until a few years ago. But recently Sir Ernest Rutherford, the British physicist, succeeded in partially transforming nitrogen, phosphorus and aluminum into hydrogen by bombarding these bodies with the alpha rays of radium. The energy exerted in these experiments was equivalent to a potential of about 1,000,000 volts. And it is believed about 2,000,000 volts, we could extract one unit of electric charge from the fifty-three which the nucleus of the atom of mercury possesses. The

nucleus of fifty-two charges which would be obtained in this way would be gold.

Shall we ever be able to obtain such a power? Recently at a meeting of the Academy of Sciences of Paris, Professor d'Arsonval exhibited a new electric generator capable of furnishing a continuous difference of potential. It would be sufficient to multiply this energy by 4 to solve the problem. There is no impossibility in theory that this result can be obtained, for the difficulties to be overcome are not greater than those which have already been overcome. On that day the "Philosophy's Stone" of Raymond Lull and Nicolas Flamel may be found. And the dream of the old sorcerers may have been realized—mercury will have been changed into gold.

It is of small importance whether the old alchemists succeeded or not. What is really remarkable is that they should have known that that could be done and that they should have chosen among all the metals those which, in spite of a quite different appearance, were the nearest to one another in their atomic constitution.

How did they know that? Neither the physicist nor the chemist of their period, nor that of any historical period known to us, gave them the least indication. These sciences were in their time very rudimentary, but if they had been a thousand times more developed and had reached the level where they were at the beginning of the Twentieth Century, they could not have known about these things. Twenty-five years ago we questioned little about atomic structure. Who, then, could have revealed this astonishing secret to some men in the middle six or seven centuries ago?

Who taught them the mysterious relations which exist between different elements and the magic formulae which can transform them? It would be very interesting, no doubt, to be able to decipher the incomprehensible books in which the alchemists concealed their formulae and give us the hidden meaning of their symbols.

The whole secret of transmutation, it has been said, is represented by one initiation, the meaning of which is not known, carved on one of the doorways of the Cathedral of Notre Dame in Paris. Their meaning has never been transmitted by oral tradition, and it is probable that on this point we shall always be reduced to supposition.

It is by another method that we must continue to follow our inquiry in order to find out where the alchemists, astrologers and sorcerers preserved their forbidden science. We have seen that they have received the principal part of their teaching from the Moors of Spain, but we know on the other hand almost exactly what point the science of the Arabs had reached, even at the height of their civilization. They were officially far below the scientific learning which we have just outlined, and which alone had the unknown masters and the esoteric schools, which alone possessed these secrets, learned them in their turn. This is what we shall endeavor to explain in the next chapter.

(To Be Continued Next Sunday)

## When the Cat's Away, This Pampered Rat Is Loosesome

MUFFY, a Maltese cat owned by Mrs. William Kennedy of Seattle, Wash., looks like a perfectly normal domesticated feline, and Ponkey, a pet white rat owned by the same woman, appears to be like any other wary, chattering member of his species. But neither Muffy nor Ponkey is an ordinary animal, because they seem to have forgotten the strongest instincts which, for uncounted centuries, have made rats and cats arch enemies.

Muffy and Ponkey are not, as they should be by nature, the stalker and the stalked, with the rat of stealthily waiting his chance to pounce upon the rat and make a meal of it. On the contrary, Muffy is Ponkey's best pal and is never so happy as when his mistress lets the rat out of his cage so that the cat can have a long half-hour of fun chasing Ponkey over the kitchen floor and wrestling with the little fellow under stove and table.

Once in a while the cat gets a bit rough in his antics with the rat, but always, apologizes in cat fashion, and the rat comes back for more rough-housing, to the great amusement of the

Kennedy family. Never once has Muffy attacked the rat with the sharp claws hidden under the soft pads of his feet, as upon Ponkey with the sharp teeth which could end the rat's life with one quick bite.

Just why Muffy and Ponkey are platonic instead of instinctive enemies, as they should be, is a question that is hard to explain. Their friend-

ship began one day when the cat unexpectedly appeared in the Kennedy living room while the rat was enjoying

a few moments of freedom from his cage. Ponkey was crawling up the back of a chair when the cat spied him.

There was a flash of fur and a scream from Mrs. Kennedy, who visioned the sudden death of her pet rat.

Her fears were groundless, however, for Muffy dropped to the floor holding the rat tenderly in his mouth. He let the rat go and did nothing more vicious than give the creature a friendly pat with a cushioned paw. Ponkey ran under a chair, only to

be captured again and brought out in the middle of the floor and released without so much as a scratch on his white body. This time Ponkey did not run away, but remained to sit and twiddle at the cat's whiskers. From that time on Muffy and Ponkey were pals. The rat has no villainous designs on the rat and the rat has not the slightest fear of the cat.

Once, when Muffy strayed away and did not come home for three days, Ponkey ran from room to room looking for his playmate. It's hard to know what a rat thinks about, but Ponkey's owners thought he acted as though he were disappointed and lonesome for his feline friend.

The photograph shows Muffy holding Ponkey in his big paws and gazing at him intently before letting him go for a merry chase around the room. Sometimes the rat scrambles between the cat's legs and runs up his back before scampering to some other place. Sometimes the cat gives spirited chase, but as often as not he retires to some antsy to pounce out on Ponkey, as the rat comes out of his hiding place to look for his playful pal.



Ponkey, the tame white rat owned by Mrs. William Kennedy, of Seattle, Wash., being petted by Mrs. Kennedy's Maltese cat. The two animals, enemies by nature, are inseparable.

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*His Lordship has been accustomed for many years to be served by his Butler in the magnificent Dining Halls of his various Town Mansions and Country Estates and with Wines of his Own Brands in probably the best Wine Cellars in England.*

But Lord Kylsant Is Now a Convict in Wormwood Scrubs Prison Wearing the Felon's Coarse Uniform and Waiting on Himself at the Prison Dining Table With a Tin Pail for His Coffee and a Carefully Weighed Hunk of Bread.

A black and white photograph of the exterior of the Church of the Holy Spirit in St. Petersburg, Russia. The church features a large central dome and two smaller domes on the sides, all with ornate architectural details. The building is surrounded by trees and a low wall in the foreground.

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# The New "X-Ray Gloves" How the Duke Reforms Speeders The New "Bed Springs Dance"



In Fashionable Circles in Europe, the New Vogue of "X-Ray Gloves" has Captured the Fancies of Women. The Gloves Are Shown, With Dark Lines Running Along the Fingers and Producing a "Skeleton" Effect. Boston Morans the Spanish Actress. Is Shown Wearing the Unusual Layer Creation, Which Doubtless Will Soon Make Its Appearance in This Country.

"THE moment some people find themselves at the wheel of an automobile, they seem to lose their sense of citizenship."

Thousands of American traffic policemen will agree with that statement which was made the other day by the Duke of Marlborough, at his expensive Blenheim Park estate in England. And in effect, the Duke has appointed himself a traffic cop so that he might prevent speeding and reckless driving through his roads. He is determined to protect the quiet and safety of the Park on which so many of the Vanderbilt millions were spent under the terms of the marriage settlement made on Long Island, New York, before his first wedding.

Some weeks ago some of the Duke's help were injured by motorists racing over the road and otherwise abusing the privileges of driving through the estate. The Duke was incensed and decided to teach the speed maniacs a lesson. He called in half a dozen engineers.

Without delay a corps of workmen was summoned and within several nights had constructed a series of dips in the roads, at either end of the numerous curves. The "bumps" worked double. Just before a dip was sunk, a thick rim was built at both ends of the dip itself.

The Duke then concealed himself and watched for results. Within three hours half a dozen speedsters had driven madly around the curves, only to break the springs of their cars in the "bumps," blow out their tires, and in several cases to run the machines into trees.

Speeding has about ended in the Park. Drivers now pass through it sedately, wondering, perhaps, when the next "bump" will develop.

The Duke's interesting expedient followed repeated warnings and the utter disregard of signs asking the motorists to behave sanely. Blenheim Park is a show place to which the public is admitted and where polo-teams or picnic groups can wander unharmed amid tylvan surroundings.



In a New Film Produced in Germany, Miss Lillian Harvey, Shown in the Photograph, Amuses the Audience by Introducing a "Bed Springs Dance." Which Calls for Much Spectacular Action, and Which Recalls to Most Spectators Similar Antics in Their Childhood. For Some Reason, This Is the First Time the Movies Have Featured This Frankish Pastime Which Almost Every Youngster Is Familiar.

## Bird Artist's Curious Studio

TRAVELERS in Norfolk, England, are invariably attracted by the old windmill that stands in the center of Hickland Road, a vast expanse of moor and wilderness, and all of them wonder, since it no longer has the ponderous arms to turn its machinery, why the structure is so well preserved, and why its upper story is made almost entirely of glass.

The fact is, the old Norfolk mill is both a residence and an art studio.

It is the abode of Mr. Roland Green, a painter of birds who has set up shop in the wilderness, shuttling the Whitehead Bird Sanctuary, so that he can study his winged subjects at close range, and catch them in just the right settings for

his canvases. Mr. Green exhibits his bird paintings annually, and the exhibitions are the only occasions which entice him away from his wilderness. His pictures of birds in flight have become famous throughout Europe. At certain hours during the day, the artist presides in one of his windows and makes sketches on what he builds his paintings.

The rest of the tower is equipped with a bedroom, a kitchen and an improved bath which draws water from the stream that winds through the moor.

Green's only companion is his father, who is a retired sailor, and who, failing to content himself with a landlubber's residence, lives in an old boat, moored to the small wharf a hundred yards from what is England's most curious art studio.



Roland Green, the Bird Artist at Work in His Windmill Tower Studio, Norfolk, England.

## Growing Trout to Order

WITHIN the last few years trout, fresh out of the water, have become highly popular for banquets, and in the dining rooms of first-class restaurants and hotels. Many restaurants display live trout in aquaria in their windows. Diners select the fishes they want, which are thereupon cooked for them and served.

This is made possible by commercial concerns engaged in the business of hatching and rearing trout to order. These take orders for them in any quantity, and ship them long distances on trucks, in ten-gallon cans, alive. En route, the water in the cans is kept fresh with an air-pump and oxygen tank.

During the last year nearly 3,000,000 live trout were thus sold, with a value of about \$30,000 at the owners of supplies. As served to the ultimate consumer, they are, of course, a high-priced food luxury. Three-fourths of them are shipped to hotels and restaurants, the rest go to fish dealers in the big cities.

There are now in this country 133 privately-owned hatcheries engaged in the trout industry, using 5,275 acres of ponds. Approximately one-half of

this total acreage is in Colorado, where many natural lakes are utilized. In these lakes young "trout" are planted in spring, and from then on they require no care except feeding with artificial food. To get eggs for hatching, adult females are caught when they run up the creeks tributary to the lakes, to spawn.

The selling of trout for food is only a minor part of the business of the commercial hatcheries. Last year they sold more than three-quarters of a million full-grown trout to sportsmen and sportsmen's organizations for stocking lakes and streams. In the same period they hatched 231,191,000 trout eggs, of which 171,004,000 were spawned by the brown trout. There is always a ready market for trout eggs, fry, "fingerlings," and yearlings.

The growth of this business of fish farming within recent years has been enormous. In the Eastern part of the United States the brook or "speckled" trout is the species chiefly cultivated. In the central and Western parts of the country the "rainbow" trout is preferred. Two-thirds of all the trout artificially propagated by the commercial hatcheries are of the latter kind.

## Weird Formations of Lava From the Hawaiian Volcano Kilauea

AMONG the scenic wonders of Hawaii are its noted craters and lava lakes, but in all the island, perhaps, there is no more weird spectacle than that provided by century-old lava formations in the vicinity of Kilauea, the famous crater thirty miles southeast of Hilo.

Great masses of molten rock have formed themselves into rough likenesses of heroic statues which resemble anything from a sea lion to a human being. On the brink of the lava lake called Halemauau, there rear up ghostly figures of stone that, back in 1750 poured from the crevices of the crater, and rolled into amazing formations just before the cooling processes fixed them forever as nature's monuments.

The photographs below show three distinct parts of the great lava bed. To a spectator in the distance, the scene on the left might easily be mistaken for a field crowded with huge fossil remains of gigantic monsters grouped together to sleep, as is habitual with the elephant.

One is reminded immediately of Lot's wife—the Biblical lady, who turned back against her master's orders to see the burning city of Sodom, and was forthwith turned into salt, when gazing at the scene shown in the center photograph. A huge formation of lava holds the crudelike of a human being, turbaned, and wearing flowing robes, seated and in an attitude of deep thought.

In that part of the lava beds pictured in the photograph on the right may be seen great rolling waves of lava that have curled themselves into a semblance of a school of sea lions or walruses sunning themselves on a rocky beach. At close range, of course, these bulky animals are many times the size of the animals which they resemble.



Lava on the Floor of the Kilauea Crater, Which Resembles Fossil Remains of Prehistoric Beasts.



The Story of Lot's Wife May Have Been Inspired by Such a Formation as This, Which Resembles a Turbaned Figure, Resting in the Desert.



At a Distance, This Accumulation of Lava Might Easily Be Mistaken for a Group of Seals or Walruses, Sunning Themselves on the Beach.



# Science News Series About Plants

**Get Intoxicated On Alcohol and Pass Through Various Stages of Stimulation and Depression Quite Like Human Beings, Can Be Put to "Sleep" By Ether, and Raise the Question Whether They May Not Have Some Queer Kind of Nervous System After All, and Even Perhaps a Small Degree of Intelligence**

PLANTS get drunk. When they do they show some of the same symptoms man does when he "takes too much liquor." First they are stimulated, then they get sleepy, and finally they collapse. If they could move, they would probably wander around among their sober plant neighbors. Having none, however, they give no one the bother of taking them home.

Plants which have been given ether, behave exactly like human beings. They faint, become "anesthetic," and if given too much they die. When coming out of the anesthetic they seem to suffer a kind of "ether sickness," which anyone who has undergone an operation under ether knows is no joke.

Why alcohol and ether should have these effects upon plants, which the majority of scientists believe have no nerves and certainly no brains, is a real mystery. It is true that Sir Jagadis C. Bose, the distinguished Hindu scientist, maintains that living plants actually possess nervous systems and even rudimentary brains, and that a turnip or carrot writhes in pain when cut. But Sir Jagadis stands almost alone among scientists in holding that belief.

Yet if plants do not have nervous systems, then what makes them act under alcohol and ether exactly as though they did have them?

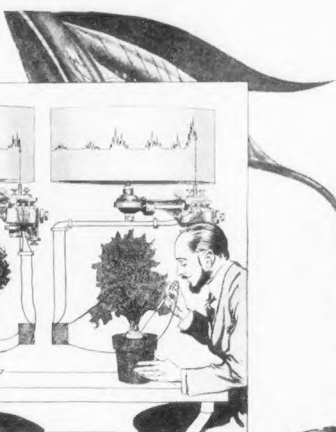
The curious behavior of the plants under the experiments, which were carried on recently at Cornell University by the distinguished Professor Wilder D. Bancroft, seems almost to justify Sir Jagadis. It makes less fantastic some of the curious pictures of "human" trees which artists have drawn from time to time since the days of the Pharaohs. It even throws more credulity on the stories of travelers who have told of animal trees with human-like tentacles which wind round the unfortunate creature straying within their reach and kill and consume it. There are of course certain plants which are even more grotesque than the sensitive plant, and which have needle-like organs to draw their juices or flowers whenever a luckless insect enters.

All of these have small hairs or feelers that seem to act as nerves of touch. When the insect comes in contact with them, some stimulus passes to the plant muscles and the trap is sprung. These insect-catching plants even digest their victims, and are not unlike the digestive juices of an animal stomach.

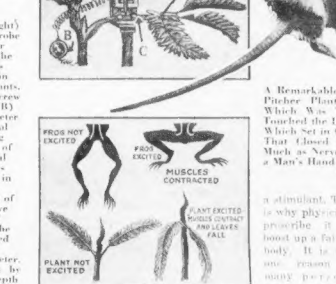
Still other plants keep their tendrils waving in air like the exploring cane of a blind man, until the sensitive tip touches some vine or another object about which it can twine. There are many of these morning-glories and the grape-vines, and to men who have seen with the perceptible movement of members of the group in the tropics, can utterly disbelieve the legends of monster plants with monstrous tentacles like those of a robed sorcerer.

Professor Bancroft, an outstanding American expert in the science of cell chemistry, which deals among other things with the jelly-like substance known as protoplasm. Protoplasm is the principal substance in the cells of man and animal bodies and also of plants. For many months Professor Bancroft and his associates have been studying what alcohol and ether do to the delicate protoplasm of the brain and nerve cells. They had found the first reason ether makes a human feel pain is that it causes certain changes in the protoplasm of the nerve cells. These changes disorganize the nerve cells more or less completely from each other and on no sensation can be carried over the nerve to the brain.

Like like material of the nerve cells, it was found, could be altered



Sir Jagadis Bose, the Distinguished "Plant Psychologist," Found That If a Human Being and a Carrot Were Struck With a Needle, the Human Nerve Response and the Electrical Current Induced in the Plant Registered Practically the Same Upon an Ingenious Device Invented by Him. Dr. Bose Thinks That This Proves the Carrot Can Feel Pain.



(To the Right) Electric Probe Used for Stimulating the "Nerve Tissue" in Certain Plants. (A) The Screw Head. (B) Galvanometer With Dial. (C) Stem of Plant. (D) Probe Connected to Galvanometer. (E) Index to Determine.

in varying degrees of thickness or wateriness—like, for example, the white of an egg. In a fresh egg this is of a certain thickness. It can be solidified by heat or chemicals. Proper action of the nerves seems to depend upon just the right state of hardness or softness of the nerve cell jelly. If it is too hard, like the cooked white egg, the nerve does not work well. This is also true if it is too soft and watery.

Other and other anesthetics and alcohol change the normal state of hardness and softness of the nerve cells, producing insensibility to pain, unconsciousness, the stupor of the drunken man, and a similar action on the brain cells, hallucinations and the "fumes" of intoxication. Certain types of insanity may be caused by this hardening and softening of the cell protoplasm.

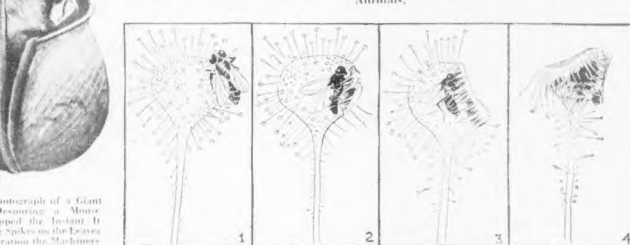
All this had been tested by the scientists at Cornell, using animals and, in some degree, human beings. It was decided to push the investigation further, and learn what the effect would be upon the protoplasm in living cells of plants.

One of the plants chosen was the sensitive member of the mimosa family called the "sensitive plant." Almost everyone knows how this closes its leaves whenever it is touched or damaged in any way.

It was one of these plants that was treated to a drink, and whose subsequent conduct so startled the learned investigators in having being a limited dose of alcohol actually acts as



The Artist Dore's Conception of the "Human Trees," Described by Dante in his "Inferno," Which Felt Pains—and Recent Experiments on Plants Suggest That They May Actually Experience Some Sensations Similar to Those Experienced by Animals.



A Remarkable Photograph of a Giant Pitcher Plant, *Sarracenia flammula*, Which Was Trapped the Instant It Touched the Long Spokened Leaves Which Set in Operation the Mechanism That Closed the Leaves Together—Much as Nerve Impulses Would Close a Man's Hand on Something Touching the Palm.

a stimulant. That is why physicians prescribe it for the production of anesthesia. The first effect of a drink is a feeling of increased activity and well-being. Too many cause depression and, at last, stupor. Before the anesthetized eyes of Professor Bancroft and his associates, the little "sensitive plant" began to behave in just the same way. Its leaves stood straighter, its spread in opening and shutting them increased, the whole activity of the plant was heightened. In fact it was unmistakably "cocky." It seemed to be in that happy stage when the human drinker feels himself to be a great person and knows that everything is for the best in the best possible world.

But presently it struck a further stage. Its movements became uncertain and haphazard, more or less like a man who has had complete control of his legs. Only the roots kept in from staggering. Then it went into the last stage. Its leaves closed and drooped. The little "sensitive plant" had taken to sleep it off.

When the plant was etherized the same curious reactions occurred. It went limp and "asleep." Presently a human being does. After awhile it began to recover. But for sometime it showed distress in the way its leaves opened and closed. While it is natural to interpret these facts as indicating some kind of "nervous system," botanists have spent years of effort trying to find traces of one without success. Yet there are few scientists who will flatly deny that some form of vegetation may possibly have something possibly like one. Nerve impulses, as we have said, are undoubtedly electrical in character. Delicate electrical instruments attached to plants register currents quite similar to nerve currents when the plant is injured.

Dr. Bancroft held this by inserting two electrodes, metal points connected by a wire with an "electrometer," in the tissue of living plants. He found that there were certain parts of vegetable and plants which gave a maximum of electric response in his apparatus, just as though he had touched a trunk nerve in an animal. They located these "trunk nerves" by proceeding in due various things to his subjects. One after another he made the regulation tests, applied to animals and got similar responses. The nerve of a rabbit craniated much more quickly than those of the slug and turtle. Therefore, it was not surprising that some trees are slower than the "sensitive plant" and all plants are faster than some of the higher animals. The surprising thing was that some of the lower animals. A frog, for example, dies an extraordinarily violent death when boiled. Its death point was 120 degrees Fahrenheit, and when it occurred the green plasma that signified its death agony was often as high as half a dozen. Five hundred units are more than sufficient to obstruct a person. Its body is so heated that the still, uncontracted heart is one of the most remarkable and nervous of vegetables, causing feelings apparently more acute than even the "sensitive plant."

Several years ago at Johns Hopkins University in Baltimore, it was proved by other botanical experiments that very small doses of poisonous chemicals, like sulphate of copper, are able to make seedlings of plants grow better instead of worse, although larger doses of the same poisons cause injury or death. This is similar to the action of substances like strychnine on a human being. A small dose of strychnine is a strong stimulant, and this

drug is so used by physicians. A larger dose, however, is a fatal poison.

Many plant activities seem to show, too, the rudiments of sense, of nerve action, even of a kind of thought. The sunflower and many other plants, for example, perceive sunlight well enough to turn daily toward the sun.

Many plants, including the "sensitive plant" itself, perceive the fall of darkness at dusk and close up their flowers or leaves for the night; probably a provision of nature to prevent damage to these delicate plant parts from frost-cold night air.

Another indication of what seems almost like thought in plants is the storage of food in plants like the ordinary potato. Thousands of years ago there were no cultivated potatoes, but a wild plant having the same habit of producing starchy tubers on its roots was living in the high mountains of South America, where the ancestors of the modern Indians of Peru came to have found and cultivated it. The country where this original potato lived is subject to extremely cold weather, although the Spaniards are warm. Accordingly the primitive potato plant developed the habit of storing food material, and made or "saves" which would be capable of new growth at some time when the plant was safely buried under ground away from the cold.

If cold weather came along and killed off all of the potato stems above ground, or even if the cold came early and suddenly in the fall and killed the young seeds also or prevented their development, the potato plant was not doomed. It still had its reserve of food and its living buds hidden underground.

The important thing about this is how the plant manages to get down to these underground tubers the supply of starchy food materials, which is stored there and which human beings eat when the potatoes are dug up and taken away from the plant that made them. Most of the water that moves through a plant, the so-called sap, moves upward from the roots to the leaves and is evaporated from them,

much as a human being loses water by perspiration. This stream of sap water obviously cannot carry down to the rest of the material to make the potatoes, which materials the plant manufactures in aid of sunlight working in its leaves, and other green parts. The stream of sap flows in the wrong direction.

There must exist, therefore, some machinery in potato plants by which the starchy materials for other building are carried down from the leaves to the roots while the ordinary sap is flowing upward of blood and lymph in the veins.

Human beings also maintain it is known, less separate sets of fluid channels, one for the blood, the other for the sap. The fluid called lymph which is believed to save important duties in removing wastes and in distributing around the body the chemicals, manufactured in some of the glands. No one asserts that the human circulation of blood and lymph is exactly the same thing as the plant's circulation of sap and food liquid, but the fact that two separate systems of moving liquids exist both in human beings and in potato plants is certainly an interesting coincidence.

There are kinds of plants, too, which are more active than the sensitive plants and which have muscular-like organs to close their leaves whenever a harkling insect enters, and twines one of a series of small hairs, the twines. These insect-catching plants then digest such insects. They by fluids not unlike the digestive fluids of an animal stomach.

A long list could be made, botanists assert, of such individual instances in which plants resemble animals; probably not because the plant kingdom is trying to ape animal creation or because plants have animal-like muscles, nerves or other organs, but merely because both plants and animals are composed of the same fundamental material, the protoplasm. Men, sensitive plants and even potatoes, if science probes deep enough, turn out to be brothers under the skin.



# Angel Cinderella the Grand Opera

## How a Good Fairy Heard the Poor Child Singing as She Waited on Customers in a Penny Candy Shop and Smoothed Her Path to Opera Prima Donna

Young Serafina as a Worker in a Chemical Factory.

FROM selling penny candies, Serafina di Leo has risen to a salary, at the age of nineteen, of over a thousand dollars a night, the youngest grand opera star to receive anything like such a contract in more than ten years.

In spite of the depression, America is still the land of quick and fabulous success for those who have it in them. Yet the recent triumph of Miss di Leo, as Leonora, in "Il Trovatore," with the Chicago Civic Opera, far exceeds those of Rockefeller, Schwab, Ford, Edison or any other self-made American millionaire. At her age, these future captains of industry had shown no great promise of getting anywhere. Any of them at that time would have had some difficulty in convincing a prospective father-in-law that he would ever earn enough to get married on. Serafina started lower than any of them, daughter of a poor Italian immigrant, in the slums of New York, yet at the age of nineteen this Cinderella stood listening to thunders of applause, not only after her curtain call, but interrupting the performance. She is a star and word of her great success has been cabled to the remotest parts of the earth, wherever there is a paper that prints important musical events.

She receives more money for one week's work than those millionaires at her age hoped to get for a year's, and she holds a five-year contract. At the end of that time she will be only 24 and ready to demand a much better one, to say nothing of being by that time a very rich woman and having made her family independent. A would-be prima donna is a nuisance, almost a calamity, in a poor family but, if by any chance she turns out to be the real thing, they are usually well repaid.

Miss di Leo got some "break" in her climb. In the first place she was born with the necessary raw materials for a grand opera voice, and the character that made it possible for her to work as hard as she does. And, as usual with that combination, went good health. That was all that was necessary, but, for good measure, she had one more asset, judgment.

Imagine the nerve of this nineteen-year-old daughter of the slums whose mother had spent her life over a wash tub and her father glad to earn \$18 a week doing odd jobs for an oil company, upholding all custom and tradition on her Chicago debut, the night of nights that was to make or break her. She insisted on a luxurious blue wedding gown. The costume designers looked at the mere child with horror, but she did not seem to be crazy. It must be ignorance.

No one has ever appeared in bridal array other than white. Don't you know that?" they asked.

"I know, but I look better in blue," she answered.

There was much conversation between the expert costume experts, who could sketch from memory what most every important dress had been in important roles for the last twenty years, and the powers in charge of the Civic Opera Company. But Miss di Leo had her way.

At first there were anxious moments in that opera house before the third act. Everything had gone so splendidly they wished they had not seen her. There was blue dress when which might spoil everything. What would the critics and public say? They soon knew.

On came the young brunette, as rare of hue as if she had been there a hundred times before, a Leonora in beautiful, deep, sparkling blue, wedding veil and all, to take her marriage vows. The veil hung from a large three-cornered, jeweled crown—another idea of the youthful wearer.

There was a pause while the audience absorbed the picture and passed judgment on the novelty. A surprised audience like a baby that has happened to hear, the longer the pause the louder the sound when it finally does come. It was one of the really great bursts



Clara Jacobo, Recent Grand Opera Prima Donna, at Work in a Massachusetts Cotton Mill at \$1 a Day.



Miss Rosa Ponelle Singing Opera Scores as She Did Her Housework—And Now the Famous Metropolitan Star.

of applause, completely stopping the performance.

The young star did not stop. "I told you so," she is too busy to stop and consider, when she is right. It is when she is wrong that time must be taken to ponder the matter.

Little Serafina was still hardly more than a toddler when the family moved to Bayonne, New Jersey, to be near her father's steady, eighteen-a-week job. Like most Italian families, this was a rather noisy one, and Serafina contributed her quota by repeating what she had heard others sing. Mrs. di Leo had once had a voice and sang in church in Italy, but it had long since been pretty well atrophied. Men are inspired to sing in a church, but women don't sing into wash-tubs.

The little girl understood that some day she would get a job in a mill, but meanwhile she was to get all of that free. A mother schooling she could. Between school, meals and sleep there was a job for her, running a tiny candy store in which Mrs. di Leo managed to add a dollar or two to her husband's wages.

But with several younger children to mind, the mother had little time to tend shop. The future prima donna had plenty of opportunity to sing to herself in that shop. Her customers were mostly children who spent about twenty minutes' time to one penny in cash.

It was unthinkable that anyone could get rich in such a business, yet there is where her fortune started. One day, when she was going through the scratched glass of the candy shop, Serafina filled her lungs and sang. The small customer did not notice her, for he had an important matter on his mind, but someone else did.

A slim figure, wearing an expensive dress, appeared in the doorway and the singer stopped. Here was a customer, appeared in the doorway and the singer stopped. Here was a customer, appeared in the doorway and the singer stopped. Here was a customer, appeared in the doorway and the singer stopped.



Miss Serafina di Leo at Home and at Work Over Her Gas Looking Range.

able-looking woman. The visitors promised to pay a whole dollar's worth if Serafina would sing. For such extravagance the girl gladly started to sing her head off, and the ladies listened. Finally Mrs. Voorhis said: "Where is your piano?" Serafina laughed all the way up and down the scale. They could no more afford a piano than a steam yacht. The next day while her eyes popped Serafina watched four movers unload a piano, an upright one of an expensive make, outside the living room door. They assured her in their own dialect that this—this gorgeous instrument—was hers. There was no installment trick, no money to pay.

An hour later the fashionable Mrs. Voorhis came tripping into the store, smiling as a fairy godmother should smile and informed the stunned keeper of the candy store that this piano was hers for keeps. After some tears were shed Serafina sang her repertoire for Mrs. Voorhis.

Every day from then on the charming visitor came and one day look her to Mme. Novelli, Italian opera soprano and formerly of the Hammerstein agreed to give the girl lessons in singing.

To earn money for her lessons Serafina first went to work in a candy laboratory of a factory where a liquid



Serafina as a Concert Singer—About Ready for Her Grand Opera Debut.

was made to kill insects. She earned \$18 a week, as much as her father. During one summer's vacation she worked there, but was told by her father that she must go back to school and finish her education. Then began her career of singing in churches, clubs and ladies' aid. Her voice was definitely established as dramatic soprano and the girl began to learn the opera—a slow and tedious process.

Then came the invitation from Mrs. Voorhis to come and live in the beautiful Voorhis mansion at Elizabeth, where she could confine herself strictly to voice culture. Here was the fairy



Miss Serafina di Leo, the New 19-Year-Old Prima Donna, as She Appeared on Her Debut the Other Day in Verdi's "Il Trovatore."

godmother ready to take Cinderella into the palace, but Cinderella declined, she stuck by her family. Hard days followed that autumn, with Serafina's younger sister having only two dimes a year. When the girl wanted candy in their "candy store," they had to say "no." But having refused one "break," Serafina made herself answer to her mother. She asked the price of a grand opera ticket and to get it boldly rang the bell of the New York apartment of Giovanni Marchetti, Metropolitan tenor, and told Mrs. Marchetti her situation. Famous people are posted by all means of "breaks," friends and cranks, so the time's selfishness was not improved. However, she was curious enough to follow her husband's companion to the grand opera, that she had a voice.

The bold maiden got her ticket, also an introduction to a group of patrons and patronesses who contributed enough to invest her in three years' training in Italy. Last February she sang her debut at La Scala, "Erzsalet Drottina." Representatives of the Chicago Civic Opera came there and offered her a contract. After her debut in America the young lady goes back to Italy to finish her contract.

"Erzsalet Drottina" discovered and rescued Clara from the rattle of the loom and paid for her study under the great teachers. She discovered herself, had to study in her few spare hours and did not get instruction out of her earnings at the factory. The only "break" she received was that her father allowed her free board and lodging in his home.

Serafina was attracted by Clara's success, which in turn was inspired by that of Rosa Ponelle, who practiced grand opera while she did housework in her Connecticut home, rising through cabaret and vaudeville to the ineffable glory of a debut with Carmen at the Metropolitan. And Mary Lewis, the "Queen of the Love of Three Kings." Those of her promoters who could not attend her family debut sent members of their families. There was a trunkload of flowers.

The girl is delighted, excited, busy, but perfectly natural and unspoiled. She knows that she is a grand opera star, a genius in the musical world, yet no prima donna airs, jealousy or

So there is nothing to stop a poor girl from getting into grand opera, if great talent—but she must be humble. Still, so much a rich man to get into Heaven. Andrew Carnegie said the last year of his life giving away millions for that purpose.



THE GRANDEST GIFT you could imagine, is this fawn-colored box, with modernistic silver and black interior . . . and what treasures it contains! Seventeen Compact, Seventeen Rouge, Seventeen Lipstick (all matching in gleaming black and silver cases), Seventeen Soap and Seventeen Face Powder, Seventeen Toilet Water, in a set of frosted glass. Seventeen Toilet Water, Seventeen Sachet, Seventeen Brilliance. And in the center, a French-toned flacon of Seventeen Perfume. The box will prove most useful after contents have been removed. How modest the price, \$10.



JOAN CRAWFORD  
METRO-GOLDWYN-MAYER  
whose spirited performance in "Possessed"  
is one of the season's dramatic successes.

# Joan Crawford advises: Give a girl a gift she can use but be sure its usefulness is quite disguised by charm

AT CHRISTMAS TIME, or any time, a girl is only interested in a gift she can use. She wants it to be charming, of course. Attractive, gay, gaily-looking! But she wants to feel, on the day after Christmas, that she's acquired something she can actually use and enjoy.

That's where Seventeen Toiletries make their entrance with a becoming lull.

"Mine . . . is though I'd laid it made to my order," that's what Joan Crawford says about Seventeen. "I had always told my friends that some day I would make a perfume . . . not smirking sweetness . . . but dash and zip . . . oh, gay, modern! And then one day I found it . . . I didn't make it . . . but Seventeen is all I wanted it to be."

Joan Crawford's choice appeals, you'll find, to any of the women on your gift list; no matter what their age, they want to express Youth, and Seventeen certainly does.

The makers of Seventeen have, in a sense, given you a Christmas gift . . . because they put up the charming Seventeen Toiletries in such attractive packages for gift purposes that you can choose from them—at a very small cost, mind you—and be sure you are making a wise selection.

There's the Seventeen Sachet, for instance. Something most women don't buy for themselves but all women love to have. And in this particular scent—in the charming Seventeen jar—it makes a lovely gift and is priced at only 75c.

Then, there's the package of Seventeen Soap and

Dusting Powder. But what soap! Creamy, luxurious-looking, elegantly wrapped in cellophane. Dusting Powder in a plaid metal box with a large fluffy puff to go with it.

Then there are the Seventeen Compacts, both single and double ones. Slim and elegant, and containing the famous Seventeen Two-Tone Face Powder. The girl who gets it is going to thank you for introducing her to this new face powder, that actually reproduces youthful tone tints.

And, of course, Seventeen Perfume and Toilet Water are always a good selection. A light, delectable fragrance. Plenty of sparkle and dash . . . plenty of sophistication . . . but not just smirking sweetness," as Joan Crawford says.

All the articles on this page are shown throughout the country at good toilet goods counters. They all bear the name of Seventeen. They all are packaged in such a way that you'll be proud to give them and the recipients will be glad to receive them.

TOILET WATER is a gift that every woman, young or old, appreciates—and how much more when the scent is that of Seventeen—\$1.25

BRILLIANCE, too, is a gift that every woman, young or old, appreciates—and how much more when the scent is that of Seventeen—\$1.25



SACHET . . . A perfect selection for the "little gift," new and different . . . 75c.



CONTACT . . . Here is a gift that will go straight to the heart of any girl . . . the most sophisticated little compact you could imagine. Thin and lovely, it glazes like onyx. The powder is that famous Seventeen Two-Tone, Single, \$1. Double, \$2.

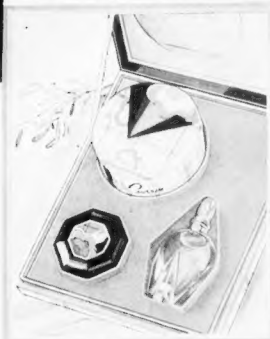
SEVENTEEN PERFUME comes in enchanting bottles in 3 sizes. This is the famous and created to inspire the mood of youth! Almost every woman has heard of Seventeen . . . and longs to try it. So many charming stars of the screen use it . . . They find it expresses the gaiety of Youth! Flacoz at \$5, \$2 and \$1.



JUNE COLLIER, well known to movie fans, selected this as a perfect Christmas gift! Assured the soft, fine lining of the smart package, gleams a dainty flacon of Seventeen Perfume, and the beautiful Seventeen Compact, that's also and of great use as a costly watch. This package is particularly convenient for making, and is truly a lot of gift for just . . . \$2.



A BATH SET . . . and quite de luxe . . . is this package containing three big, round cakes of Seventeen Soap, and the soft, metal box of Seventeen Dusting Powder. The soap will be particularly appreciated by women with delicate skins. The powder is soft and fine. Beautifully packed, this is truly a luxurious gift . . . but the price is only \$2!



AND NOW SUE CAROL makes a selection . . . and here it is! A package of the wonderfully effective Seventeen Two-Tone Face Powder—the powder that effectively imitates the natural tones of lovely skin—And a Seventeen Compact—the double compact, selling regularly for \$2—and a flacon of Seventeen Perfume—the fragrance that breathes youth. The price of this lovely package is \$5.



Seventeen Face Powder, Toilet Water and Sachet are beautifully joined in this stunning box with black and silver lining. The powder is that new Two-Tone Seventeen, made in shades that catch the subtle tones of youthful skin. The price is no indication of the impressiveness of this gift, for the package is only \$5.

## Seventeen

# The Ancient Venus Rescued from the Sea After a 2000-Year Bath

Somewhat Washed Away in Spots, Naturally, but Still an Exquisite Masterpiece to Match Her Younger Sister, the "Crouching Venus" of Rhodes, Which Was Hidden in the Earth Instead of the Water for Almost as Many Centuries



The "Harbor of the Galleys" at Rhodes, Where the Great Statue Called the "Colossus of Rhodes" Once Stood and Where the Newest Venus Has Just Been Recovered From the Sea.

ROME, Dec. 1.

NOT long ago the Superintendent of Monuments and Excavations of the ancient island had an inspiration. It suddenly occurred to him that it might prove profitable to explore the bottom of the harbor from the western side of the port to the old entrance over which, many centuries ago, the famed "Colossus of Rhodes" spread its gigantic legs. Maybe there was something down there, some lost treasure of art such as had been found in similar historic harbors. So he sent divers down to poke around the sea bottom.

And sure enough, there was something. The divers found a Venus, a masterpiece of some old Greek sculptor, four enough to rank with any of the various Venuses in the great museum of the world. The statue had been lying in the harbor for more than 2,000 years. It was as though some had dropped that was plain long enough for a bath even for centuries, and had whispered the suggestion to go and look for it.

It first only the body was found. Patient searching brought to light at last the head. No amount of searching has yet revealed the arms and it is likely that this newest Venus will have to go similar like her sister, the Venus de Milo.

The statue, which has been christened the "Modest Venus" in the Museum at Rhodes. Here is also another famous statue, the so-called "Crouching Venus," which was dug up close to the massive fortifications that the crusading knights of St. John built in the fourteenth and fifteenth centuries. This discovery was also made coincidentally recently and now the museum at Rhodes is the only one that houses two statues of the old Goddess of Love of such exquisite workmanship.

The "Crouching Venus" first hidden in earth from her statue did not under the sea. When she was dug up there was still a lot of blue in her eyes, for at the time she was made all statues were colored after they were carved. The ancient Greeks and Romans were shocked to see the white uncolored statue and figures which have come down the centuries from their time into this one. They are only that way because the paint and coloring have worn off. When they were made, the idea was to have them as life-like as possible, so whatever parts of the body that showed were tinted in natural color, the eyes and lips painted, the hair given its proper shade, and clothing and sandals and ornaments all were colored.

Rhodes lies off the shores of Asia Minor, on the fringe of the hundreds of picturesque islands which stretch from the southern end of modern Greece and fence off the Aegean Sea from the Mediterranean.

Among them is Lachos, where the poetess Sappho was born; Naxos, where the wine-god Bacchus found Ariadne when she had been cruelly abandoned by Theseus after helping him kill the Minotaur; the half-island and half-island of Cos. All the islands are rich in legend, but none more so than Rhodes. Long before the Greeks it had a historic population who were the most skillful metal-makers and gold miners. They called themselves "The Children of the Sun."

There are really two harbors, the western and eastern side of the bay. The eastern harbor is deep enough to admit large steamships and the western has become filled with silt and gravel and is so shallow that only small craft can move around in it. But it is this western harbor which was used from time immemorial by the boats of racing, and it is all undoubtedly covered many rich treasures.

The "Modest Venus" was only the first of these to be recovered, for the work of exploration is still going on. The statue was given the name of the "Modest Venus" because of its attitude and drapery. It is the finest Parian marble and six feet three inches tall. Although the arms are missing, the anatomical details are so correct that their position can be ascertained from the flexure of the muscles



Pulling Up the Body of the Ancient Venus After Her Discovery by Divers. The Head Was Recovered Later, but Not the Arms.



The Torso of the Recently Discovered Venus of Rhodes, and Beside It Her Face, Showing the Erosion Caused by Her Prolonged Immersion in the Sea Water.



Part of the Ancient Walls of Rhodes and the Tower of St. George, Near Which the Previously Discovered Venus Was Found Buried in the Earth.



The "Crouching Venus," Found Close to the Walls of the Ancient City of Rhodes, Where the Statue Had Been Buried Some 1,600 Years Ago, Probably to Save It From the Destroying Hands of Religious Fanatics.

of shoulders, back and spine. The right arm was raised and bent as a shield over her breast, hiding it. The left was extended along the body and clinging to the draperies, to cover herself still more.

The head, turned to the left and slightly raised, has irretrievably lost almost all the details which must have constituted its greatest charm. Now it is this to be wondered at, considering the centuries it was buried by inches around the gravel. It cannot be restored.

Rhodes now belongs to Italy and Professor Giulio Jacopi, one of the most distinguished of Italian antiquarians, was sent by Mussolini to examine the statue. In an article in the Bulletin of Art of the Ministry of National Education, he describes it and tells why he believes it was created about the beginning of the Fourth Century B.C. This was, roughly, the time of Phidias and Praxiteles, perhaps the greatest sculptors who ever lived.



The Face of the Recently Discovered Venus of Rhodes, and Beside It Her Torso, Showing the Erosion Caused by Her Prolonged Immersion in the Sea Water.



Part of the Ancient Walls of Rhodes and the Tower of St. George, Near Which the Previously Discovered Venus Was Found Buried in the Earth.

Phidias was the older. He is believed to have lived about 450 B.C. It was he who carved one of the Seven Wonders of the Ancient World, the gigantic statue of the Olympian Zeus, on Jupiter, in the temple at Olympia. No fragment of it now exists. It was Praxiteles who carved the "Caryatid of the Capitol" which was the original of the "Marble Faun" of Hawthorne's famous story. He also carved the statue called the Cnidian Venus which, next to Phidias' statue of Zeus, was the most admired of antiquity.

"The lovely lineaments of the face," writes Professor Jacopi, "well may also be removed. And it would be ill-advised to pretend that, with all the corrosion the statue has suffered, we can attribute it to any one hand in the present state of our knowledge."

Nevertheless, there are many antiquarians who have studied the statue who think it may have been made by Phidias himself.

Professor Jacopi fixes the age of the Venus by the arrangement of her hair and her draperies. It appears from his article that the goddess of Love was subject to fashions in clothes quite like any woman. The statue in fashion with her, however, more violent in the case of the goddess. Either she wore clothes, or she did not. But even when she did they usually consisted of a single drape, the folds of which might cover her to the shoulders or might be gathered around the waist.

The statue was given the name of the "Modest Venus" because of its attitude and drapery. It is the finest Parian marble and six feet three inches tall. Although the arms are missing, the anatomical details are so correct that their position can be ascertained from the flexure of the muscles



The Newly Found Venus Recovered by Divers at Rhodes. After Lying for 1,600 Years, at Least, at the Bottom of the Sea.

proportions, 6 feet 3 inches tall, and was certainly intended for the small but magnificent Temple of Venus, ruins of which have been identified on the island.

The famed "Colossus of Rhodes," a gigantic bronze statue of the Sun God, is supposed to have straddled the harbor close to the place of the "Modest Venus" discovery. It was 105 feet high.

The island of Melos, where the Venus de Milo was found, is not far away. She, too, is a "Modest Venus," even more modest than this new one, and her pose is almost the same. Like the newly discovered goddess, the Venus de Milo is armless, although the artist, in Melos, when measuring from the carefully made statue which she had been hidden for more than twenty centuries.

The Venus de Milo lost her arms in a first-hand fight between the Greek and the Roman. The Greek, the Roman, even more modest than this new one, and her pose is almost the same. Like the newly discovered goddess, the Venus de Milo is armless, although the artist, in Melos, when measuring from the carefully made statue which she had been hidden for more than twenty centuries.

This is largely due to the fanatical zeal of the early Christians, who hated the statue as the symbol of everything they detested among the "pagans," and who ruthlessly destroyed her statues wherever they could.

# A Christmas Bargain

## Sunkist Jr. JUICE EXTRACTOR

*at the Lowest price in History*

**Was \$14<sup>95</sup>  
NOW \$11<sup>95</sup>**

NOW available in less than \$100.00  
extractor and 12 extra hardy, seedless navel oranges  
at \$1.00 each.  
An all-around 12 oz. glass, 12 oz. Metal, 12 oz. Glass  
for only \$1.00.  
AN IDEAL GIFT NEEDED IN EVERY HOME



**... zip... zip —  
and the juice pours out**

NO more washing and squeezing. The  
extractor does all the work. Just insert a  
whole navel orange and three minutes  
later, you have fresh juice. It's so easy,  
it saves money. Sunkist Jr. gets more  
juice from each orange or lemon. No  
oranges are about as much juice as twelve  
squeezed by hand!

**EASIER TO CLEAN THAN A HAND  
REAMER** Just lift off the glass bowl, flush

under a faucet and it's CLEAN. There  
are no crevices, no hidden places where  
the juice can get stuck. ABSOLUTELY GUARANTEED.  
every home use Sunkist Jr. extractor. Department stores, chain stores, delicatessens, hardware  
and housewifery stores. If your  
dealer is unable to supply you, send your  
order and check direct to us. It's our duty  
given in the lower right hand corner.



**R**IGHT now there is  
a bountiful supply  
of delicious Sunkist  
seedless navel oranges.  
Buy two or three dozen  
at a time at present  
favorable prices.

**Your grocer has orange bargains, too!**

**Golden, juice-laden Sunkist California oranges  
...overflowing with goodness and healthfulness**

**M**ILLIONS of people are  
now drinking oranges every  
day. It is becoming America's fa-  
vorite fruit habit.

In fact, nutritional authorities  
rank this very important state-  
ment as one of the most important

of our time. They advise the  
consumption of both the  
fruit and the juice.

There is an experimental  
proof that they can help to arrest  
cancer, gum troubles and  
other infections.

So oranges are not only good,  
but they are good for you. Some  
authorities recommend two full-  
size (8 ounce) glasses daily of  
fresh orange juice with the juice  
of half a lemon in each—even  
when you eat liberal amounts of  
vegetables and other fruits.

Not every so-called "orange  
drink" will do. It must be fresh  
and fresh and rich. The only way  
to be certain of these qualities is  
to "See it made" of fresh, ripe,  
finest oranges. So for the family's  
daily glasses of juice served at  
home choose California Sunkist  
oranges. The highest authority  
vouches for the statement that  
they have richer juice and finer

flavor. You will know them by  
the brighter, deeper color and the  
trade-mark "Sunkist" stamped  
on the skin and tissue wrapper.

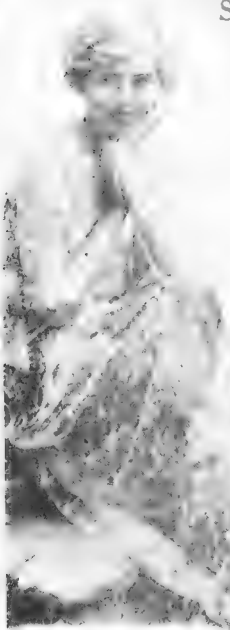
Right now there is an abun-  
dant supply of extra fine Sunkist  
seedless navel oranges on the  
market. They are safer for chil-  
dren, easier to use, chock full of  
richer juice. Prices are moderate  
and their delicious, healthful  
juice is one of the most econom-  
ical daily helps you can provide  
for your family's welfare.

California Fruit Grower  
Exchange, Dept. of Fresh Fruit  
Drinks, 914 N. Franklin Street,  
Chicago.



# Entertainment

**President Hoover's Brother-in-Law Caught With Nineteen Pints of Whiskey, Rev. Billy Sunday's Notorious Son, Senator Heflin's Profligate Heir, and the Unfaithful Wives and Runaway Women Who Have Disgraced Eminent Families**



Mrs. George F. Johnson, wife of the late Senator from Georgia, who was killed in the Spanish-American war.



Young Billy Sunday, son of the famous evangelist.



Portrait of a man, likely a disgraced family member.



Portrait of a woman, likely a disgraced family member.

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Box 100

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# This year you can give FRESH cigarettes

**N**EVER before at Christmas could you give what you can send to friends this year—because this is the first Christmas of Camel Cigarettes in the Camel Humidor Pack.

That means you can give the unmatched flavor of the fine, clean, dust-free, fragrant tobaccos in Camels, knowing that it will stay fresh till the last Camel in the last pack has been enjoyed.

Contrast that with the bite-and-burn of dried-out or parched dry tobaccos, and you'll know

why Camels make such a welcome Christmas gift.

No matter how many miles you send them, no matter if someone else happens to send Camels too—the fine Turkish and mild Domestic tobaccos in Camels will keep mild and cool and throat-easy, thanks to the moisture-proof wrapping which seals Camel flavor in the Camel Humidor Pack.

Be smart this Christmas. Make your shopping easy—and your gifts welcome by sending Camels straight through the list.

R. J. REYNOLDS TOBACCO COMPANY'S COAST-TO-COAST RADIO PROGRAMS:  
Camel Quarter Hour, Morton Downey, Texas Wares, and Camel Orchestra, direction Jacques Tourneur, every night except Sunday, Columbia Broadcasting System. PRINCE ALBERT QUARTER HOUR, Alvin Karp, "Off Broadway," and Prince Albert Orchestra, direction Paul Van Lion, every night, except Sunday, N. B. C. Red Network.

See local paper for time

## CAMELS

Made FRESH—Kept FRESH

Don't remove the moisture-proof wrapping from your pack of Camels after you open it. The Camel Humidor Pack is protection against perfume and powder odors, dust and germs. In offices and homes, even in the dry atmosphere of artificial heat, the Camel Humidor Pack delivers fresh Camels and keeps them right until the last one has been smoked.

R. J. REYNOLDS TOBACCO COMPANY  
Winston-Salem, N. C.



CAMEL  
HUMIDOR  
PACK

Smoke a  
**FRESH**  
cigarette











सिंह यूरोप

You will find it the first and only low-priced car to offer both Synchro-Mesh transmission and Free Wheeling—a combination that assures quick, quiet, easy gear shifting and positive control of the car under all driving conditions.

You will see the finest Fisher bodies Chevrolet has ever introduced—and a type of construction beauty that has already won widespread admiration. And in addition, you will find the same fundamental factors of dependability and economy that have gained the approval of millions of Chevrolet owners!

til that has, in the past, been solid and dependable in the past, plus all the new advancements given below—at one of the lowest prices in the market! That's why the new Chevrolet is called the Great American Value for 1932!



## A black and white photograph showing a close-up of a person's hand, wearing a light-colored sleeve, turning a circular control knob. The knob has a cross-shaped handle. The background is dark and shows parts of a machine, including a large circular component with a cross-hatch pattern and other smaller knobs and levers.



## A black and white photograph showing the front view of a 1929 Buick sedan. The car features a prominent grille, large round headlights, and a wide, flat hood. The front bumper is visible at the bottom. The car is parked on a light-colored surface.



The new E-sher beds are the smartest ever to appear in the low-price beds. Based on the shrunken economy, the standard is a combination of a top layer from it wood for only one sweep upward to a second in unbroken curve. Fisher craftsmen have added many new elements of strength, quietness and rigidity to the E-sher wood-and-steel structure. In later use, it has been needed for all occupants.

Transmissions most in clutch action, and to allow for the increased power of the Chevrolet six-cylinder engine, an improved clutch has been built into the Chevrolet chassis. Result is a new, new lubricated clutch bearing to new clutch speeds and that pressure is applied evenly throughout the entire life. Thus, clutch life expectancy has been reduced to a minimum and durability and dependability have been substantially increased.

Another modern feature formerly associated only with higher priced cars is the constant-idle carburetor. The feature on Onco's models guarantees a ready supply of fuel in the carburetor at all times. Combined with the standard full-throttle air filter, this is an efficient intake device that assures good operation at all speeds. A new hot control device, regulated from the dash, allows warming the engine more quickly and allows for more efficient operation in cold weather.

For greater smoothness the new GEMM lets us line up the source and target registers to avoid the extra  $\text{mov}$  from  $\text{r11}$  to  $\text{r10}$  and back. We're taking it one step further and *not* having a  $\text{mov}$  to load the constant  $\text{scale}$ . As a result, we now have a  $\text{scale}$  register,  $\text{r10}$ , that is *not* used by any other instructions. This is a very handy place to store the  $\text{scale}$  value,  $\text{scale} = 1.0$ , for use in the  $\text{fdiv}$  instructions. The expression

One of the most interesting new varieties I've tried is now being listed in the catalogue for the 1991 season. It's called the 'Bella' and it's a new variety of sweet corn that's developed by the seed of a corn plant from the 'Bella' and put the seed in my desert potting. Being so in the desert, it's a bit of a surprise that it's a new variety of sweet corn that's been developed in the low price field.

**\$475**

PRICED AS LOW AS

... That's a million dollars' worth of equipment extra

... Motor Company, Detroit, Michigan. Division of General Motors

**\$475**

that Multigan aerial equipment extra  
Motor Company, Detroit, Michigan. Division of General Motors

## THE GREAT AMERICAN VALUE FOR 1932

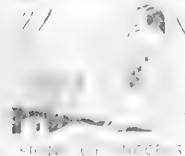


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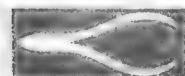
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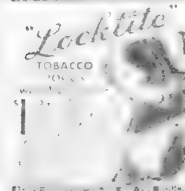


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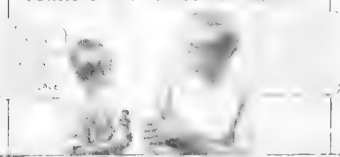


FREQUENT COLD MEAN YOU'RE CON



"This X-RAY shows why you have so many COLDS"

Joints Stiff?—Hurt to Move



SLOAN'S LINIMENT

Shampoo Yourself with Cuticura Soap

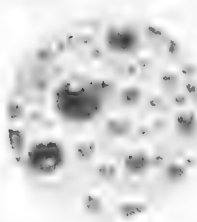
Apply Cuticura Soap and Cuticura Ointment. Shampoo with Cuticura Soap and Cuticura Ointment. Rinse thoroughly.



IMPORTANT!—Fleischmann's Yeast for health is sold only in the U.S. Eat FLEISCHMANN'S YEAST

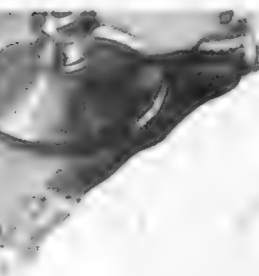
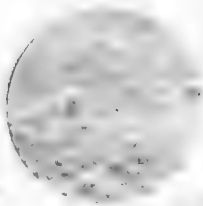
# Air holes in your cake?

not  
with  
Royal



Cake batter made with cheap, ordinary baking powder (photographed through the microscope) after 5 minutes (note the large, irregular bubbles) are holes that will make your cake stale quickly.

Cake batter made with Royal Baking Powder (photographed through the microscope) after 5 minutes (note the small, uniform bubbles) are holes that will make your cake stay fresh for days.



## Only cheap, ordinary baking powders give you coarse-grained cake

If you could look inside your cake while it's baking, you'd see in a minute why some cakes are velvet-textured . . . others coarse and full of holes.

Why some stay fresh for days . . . while others soon dry out and lose their flavor.

It all depends on the size of the bubbles in your batter. Bubbles like those in the photographs of cake batter above.

These pictures were taken through a microscope—the very first photographs of cakes baking in the oven.

Compare them—and notice the difference in the size of the bubbles.

In the batter made with Royal Baking Powder, you see only *tiny* bubbles, all the same size. And these small, uniform bubbles are the secret of fine, even texture. When this Royal cake came out of the oven, it

was sheer perfection! As smooth as velvet . . . delicately tender.

But look at the big puffy bubbles in the batter made with cheap, ordinary baking powder!

Do you realize that, when you use ordinary, cheap baking powder, every big bubble in the batter leaves a large hole in your finished cake? That these large



### Free Cook Book!

Mail the coupon today for your free copy of the famous Royal Cook Book.

### Warning to Home Bakers bake from Recipes

WHETHER you are a home baker or a professional baker, you know that the most important ingredient in baking is the quality of the baking powder.

That's why the best bakers use practically all commercial baking powders are planned for Royal. The Cream of Tartar baking powder of your substitute choice.

Take no chances. Always use Royal, the choice of food experts and discriminating housewives for over 60 years.

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# T H N D B B S

"I have  
always used  
**LUCKIES**"

"I have always used LUCKIES and the improved Cellophane wrapping with that little tab in it keeps your package so secure."

*Robert Montgomery*

Robert Mont-  
gomery  
Columbia  
St. J.  
New York  
M.G.M.

Made of the best tobaccos—  
The Cream of Virginias—LUCKY  
STRIKE always offers the throat pro-  
tection of the exclusive "TOASTING"  
Process which includes the use of  
modern Ultra Violet Rays—the pro-  
cess that expels certain harsh, biting  
irritants naturally present in every  
tobacco leaf. These expelled irritants  
are not present in your LUCKY STRIKE.  
"They're out—so they can't be in!" No  
wonder LUCKIES are always kind to  
your throat.

**"It's toasted"**

Your Throat Protection—against irritation—against cough

And Moisture-Proof Cellophane Keeps  
that "Toasted" Flavor Ever Fresh



**MOISTURE-PROOF  
CELLOPHANE**

Sealed Tight—Ever Right  
The Unique Humidor Package  
Zip—And it's open!

See the new notched tab on  
the top of the package. Hold down one  
half with your thumb. Tear off the other  
half. Simple. Quick. Zip! That's all. Unique!  
Wrapped in dust-proof, moisture-proof,  
germ-proof Cellophane. Clean, protected,  
neat, FRESH!—what could be more modern  
than LUCKIES' Improved Humidor package  
—so easy to open! Ladies—the LUCKY  
TAR is—your finger nail protection.





Johnston offers



freshness you can see

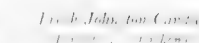
IN CANDIES FOR HOME... FOR GIFTS... FOR ENTERTAINING

**Johnston's**  
CHOCOLATES

Johnston sweets. You will find Johnston everywhere at the bottom

## FREE PARTY BOOK

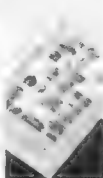
My "Sweet Pines" is a fine natural  
 with a lovely blue color. I have  
 a few others, some of which are  
 but gay, unusual, amusing. The best of them  
 Just send one at right.



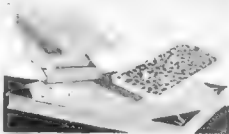
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## CHAPTER XVII Disturbing Thoughts

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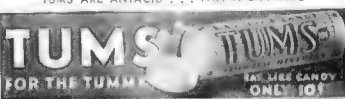
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## (Continued from Double Page)

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